



**BENZOFURAN COMPOUNDS, COMPOSITIONS AND METHODS
FOR TREATMENT AND PROPHYLAXIS OF HEPATITIS C VIRAL INFECTIONS
AND ASSOCIATED DISEASES**

FIELD OF THE INVENTION

The present invention relates to novel benzofuran derivatives and analogs, as well as compositions containing the same and to the use thereof for the treatment or prophylaxis of viral infections and diseases associated therewith, particularly those viral infections and associated diseases caused by the hepatitis C virus.

BACKGROUND OF THE INVENTION

Hepatitis C is a common infection that can lead to chronic hepatitis, cirrhosis, liver failure, and hepatocellular carcinoma. Infection with the hepatitis C virus (HCV) leads to chronic hepatitis in at least 85% of cases. It is the leading reason for liver transplantation, and is responsible for at least 10,000 deaths annually in the United States (Hepatology, 1997, 26 (Suppl. 1), 2S-10S).

Interferon and interferon in combination with ribavirin are used in the U.S. for hepatitis due to HCV. These treatments are associated with improved serum enzyme response in some patients. The remainder are non-responsive to treatment. For responders, a sustained clinical improvement is seen in only a small percentage of patients; the majority of patients relapse upon cessation of treatment. Thus, the effectiveness of therapy for chronic hepatitis C is variable and its cure rate remains low. Moreover, therapy is often associated with considerable side effects.

New therapies and preventatives are clearly needed for infections and diseases caused by the hepatitis C virus.

The hepatitis C virus is a member of the Flaviviridae family. The genome of HCV is positive strand, single stranded linear RNA (Hepatology, 1997, 26 (Suppl. 1), 11S-14S). HCV displays extensive genetic heterogeneity; at least six genotypes and more than 50 subtypes have been identified.

Following infection by HCV, the viral RNA is translated into a polyprotein. This approximately 3,000 residue polyprotein is subsequently cleaved into individual proteins by